

**REMARKS**

Claims 1, 2, 4, 5, 9-13 and 16-10 are pending in the application.

Claim 13 has been withdrawn on the basis of the Response to Restriction Requirement made on July 20, 2009.

Claims 3, 6-8, 14 and 15 have been cancelled without prejudice or disclaimer to the subject matter contained therein.

New claims 16 and 17 have been added to recited subject matter previously contained in claims 4 and 5. New claims 18 and 19 have been added to recite subject matter previously contained in cancelled claims 14 and 15.

Claims 1, 2, 4, 5, and 9-12 have been amended to clarify the subject matter recited therein. Bases for the amendments can be found through out the application and claims as-filed and, for example, at page 4, lines 2-4, 11-13 and 29-31; page 6, lines 9-10 and line 35 through page 8 line 11, i.e. Example 1; and page 12, line 2 through page 13, line 12, i.e. Example 5.

Applicants specifically retain the right to reassert any cancelled or amended claim in its original scope in this or the appropriate divisional, continuation or continuation-in-part application.

The amendments do not add any new matter within the meaning of 35 USC §132. Entry of the amendments is respectfully requested.

1. Rejection under 35 USC §101

In the Official Action, the Examiner has rejected claims 14 and 15 as being directed towards non-statutory subject matter. Claims 14 and 15 have been cancelled. New method claims 16 and 17 have been added and are now directed to statutory subject matter. Accordingly, the basis of the rejection has been removed and withdrawal thereof is respectfully requested.

2. Rejection under 35 USC §112, second paragraph

The Examiner has rejected claims 1-12 and 14-15 as being indefinite for failing to particularly point out and distinctly claim the subject matter Applicants regard as the invention. Applicants submit that the claims have been amended to clarify the subject matter recited in the rejected claims and, specifically, to rectify the points in claims 1, 4 and 5 identified by the Examiner.

As such, all the pending claims particularly point out and distinctly claim the subject matter of the instant application. Accordingly, the basis of the rejection has been removed and withdrawal thereof is respectfully requested.

3. Rejection under 35 USC §§102(b)/103(a)

The Examiner has rejected claims 1-11 and 14-15 as being anticipated by or, alternatively, obvious over Camburn, in U.S. Patent No. 5,552,175.

Applicants traverse these rejections.

The test for anticipation is whether each and every element as set forth is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP § 2131. The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP §2131. The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

To establish a *prima facie* case of obviousness, the Examiner must satisfy three requirements. First, as the U.S. Supreme Court very recently held in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), “a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. ...it [may] be necessary for a court to look

to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. ...it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does... because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." (*KSR*, 550 U.S. 398 at 417.) Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *Amgen Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991). Lastly, the prior art references must teach or suggest all the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496 (C.C.P.A. 1970).

Applicants respectfully submit that the instantly pending claims are not anticipated by the cited reference, because the cited reference does not teach each and every element of the present claims. Likewise, a *prima facie* case of obviousness has not been established for the same reason, i.e. each and every element of the instant claims is not taught by the cited reference as required by *In re Wilson*.

With respect to anticipation, Applicants submit that Camburn does not teach each and every element of the instantly claimed method. Specifically, Camburn does not teach a method for treating vegetable material formed by member selected from the group consisting **whole oat grain, whole rye grain, whole barley grain and an oat bran concentrate**, with a view to improving solubility in an aqueous phase of non-starch polysaccharides  $\beta$ -glucan or pentosan contained in the material. Camburn is directed to the manipulation of foodstuffs such as cereal and other plants and most specifically cereal flours or starches. See, for example, claim 12 of Camburn.

Applicants submit that the energies taught in Camburn thus concern the specific vegetable materials of the Examples, which are malted or biscuit wheat flour and tapioca starch. The materials of the Examples do not comprise vegetable material according to the instant claims, i.e. vegetable matter formed by the **whole grains of oat, rye or barley grain or an oat bran concentrate oat**. In fact, Camburn teaches that cereal flours with the bran removed are preferred. See, col. 5, lines 33-

36. As such, Applicants submit that the wheat flours according to the Examples of Camburn only contain minor amounts of non-starch polysaccharide according to the instant claims.

Furthermore, Camburn teaches a mechanical energy input in extrusion of from about 0.124-0.16 kWh/kg as claimed in claim 1. However, no generic range for energy input is taught anywhere in Camburn. Applicants submit that the range of Camburn claim 1 appears to have been derived from the Examples. Specifically, the lower limit of 0.124 kWh/kg appears to stem from Example 1, and the upper limit appears to be an approximation of the 0.158 kWh/kg in Example 5. Even though the energy range taught by Camburn overlaps with that of instant claim 1, there is no description by Camburn of an extrusion energy input within the overlap (0.15-0.16 kWh/kg) used to crush oat, rye or barley grain material, including the bran, to damage cells containing  $\beta$ -glucan or pentosan and thereby improve their solubility. An energy input of 0.15 kWh/kg or more taught by Camburn is directed to malted wheat flour and tapioca starch according to Example 5.

For these reasons, Applicants submit that each and every limitation of the instant claims is not taught by Camburn and withdrawal of the anticipation rejection is respectfully requested.

With respect to obviousness, Applicants submit that instant claim 1 is patentable over Camburn. Camburn does not teach or suggest crushing vegetable material so as to damage cells containing  $\beta$ -glucan or pentosan and thereby improve their solubility in an aqueous phase. Wheat flour freed from bran does not contain any appreciable amount of non-starch polysaccharides such as  $\beta$ -glucan, which occurs partially from the bran fraction of oat grains, or pentosan, which occurs in rye grains. Oat and rye are not taught by Camburn, which primarily teaches wheat. Wheat flour contains wheat starch, i.e. alpha-glucan, and is rich in amylopectin. Solubilizing alpha-glucan is the focus of Camburn. Example 5 and Table 7 of the instant application demonstrate that extruded oat bran in contact with water generates a progressively growing viscosity. However, amylopectin reduces viscosity growth. Therefore, the teachings of Camburn utilizing large amounts of wheat flour and high contents of amylopectin are not capable of producing a high viscosity according to the instant subject matter. See, Examples 1 and 2 of Camburn, showing viscosities of 4 and 3 mPAs, respectively, and Tables 2, 3 and 8 of the instant application, showing viscosity in excess of 300, as well as Table 7, showing the low impact of increased amylopectin percentage on viscosity.

On these grounds, Applicants submit that the instant claims are patentable over Camburn in U.S. Patent No. 5,552,175.

4. Rejection under 35 USC §103(a)

The Examiner has rejected claim 12 as obvious over Camburn in view of Lehtomaki et al., in U.S. Patent No. 5,106,640.

Applicants traverse this rejection.

Claim 1 is allowable for the reasons set forth above. Claim 12 depends from claim 1 and necessarily contains all of the features found in claim 1. Therefore, claim 12 is allowable for being dependent upon an allowable base claim.

On these grounds, Applicant submit that the rejected claim is patentable over Camburn, in U.S. Patent No. 5,552, 175, in view of Lehtomaki et al., in U.S. Patent No. 5,106,640.

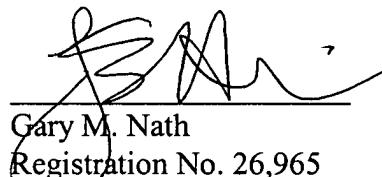
**CONCLUSION**

In view of the foregoing, Applicants submit that the pending claims are in condition for allowance. Early notice to that effect is earnestly solicited. The Examiner is invited to contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicants petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,

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